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EXAMINER	
SALTARELLI, DOMINIC D	

ART UNIT	PAPER NUMBER
2623	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/600,460	FILISAN, ANDREA POLO	
	Examiner	Art Unit	
	Dominic D. Saltarelli	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed February 28, 2006 have been fully considered but they are not persuasive.

First, applicant argues that none of Nicholson, Hamlin, and Hoarty, whether considered separately or in combination, suggests demodulating only digital signals which are then remodulated with a sole type of modulation, and then mixing the remodulated signals with analog signals which have not been processed in the same way as the digital signals (applicant's remarks, page 3, lines 7-12 and page 4, lines 15-21 and page 7, lines 1-3).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., processing only the digital signals and not processing the analog signals) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). While the claims describe means for processing of digital signals, they are merely silent regarding the treatment of analog signals aside from receiving and mixing said signals. Further, should applicant amend the claims to include such limitations, the examiner must note that any combination which teaches the processing and format conversion of both analog and digital signals will inherently require different processing means for each, as analog and

digital signals carry data in fundamentally different ways which requires different processing means to handle said signals.

Second, applicant argues that the combination of Nicholson and Hamlin would not be obvious to one skilled in the art, relying upon the assertion that the interface pods disclosed by Hamlin cannot be used in an environment wherein equipment is required to send and receive information (applicant's remarks, page 4 line 25 – page 5 line 2).

Nicholson is modified in view of Hamlin in a manner such that hardware components are added to the central control center, introducing the capability of delivering additional services to subscribers (services which are received in different formats at the central controller). It does not render the combination unobvious simply to recognize that receivers would also have to be modified in order to demodulate the signals after they have been "remodulated" at the central controller in a particular manner. Therefore, it does not affect the combination, nor the obviousness of the combination, to claim that particular receivers disclosed by Hamlin (a secondary reference) are incapable of the same two way communications enabled by Nicholson, as this is simply irrelevant. Further, the interface pods disclosed by Hamlin are bi-directional (see Hamlin, col. 4, lines 27-33 "the interface pod 44 is coupled via **bi-directional line 56** to the communication bus 36 [*emphasis added*]), however, as stated, this is irrelevant.

Further, applicant argues that Nicholson already requires identical office terminals for receiving signals having different formats, allegedly negating the provided motivation to combine Nicholson with Hamlin (applicant's remarks, page 5, lines 3-8).

In response, the examiner sees no such teaching in Nicholson which suggests that all office terminals are identical. Column, 5 lines 26-44 and corresponding fig. 4 describe a typical office terminal, which consists of several different devices, such as a computer, a computer modem, a camera, a microphone, a TV receiver, and a VCR. The only devices necessarily common to each terminal are remote control 33 and filter 23, all other devices being specific to the service being utilized. The conclusion the examiner draws from the disclosure of Nichoslon is that several different and unique receivers are necessary to utilize the different services provided over the network, not a series of "identical office terminals".

Third, applicant argues that Nicholson is able to distribute different format signals with less equipment than Hamlin requires, and thus one of ordinary skill in the art would not be motivated to combine Nicholson with Hamlin because of the added hardware requirements, stating such a modification would be unacceptable (applicant's remarks, page 5, lines 17-22).

In response, the examiner does not see the basis for this argument. The interface pods of Hamlin are a requirement of distributing signals in a **common**

format. The fact that Nicholson uses less equipment to distribute signals in **different formats** does not render the combination unobvious. The combination itself is to enable the system disclosed by Nicholson is to convert signals into a common format, requiring additional hardware components beyond what Nicholson teaches is required for transmitting signals in different formats.

Fourth, applicant argues that Hoarty is not analogous art (applicant's remarks, page 6), because Hoarty refers to a broadcasting cable system instead of distributing signals within a condominium.

In response, the only difference between the distribution system of Hoarty and the distribution systems of Nicholson and Hamlin is one of geographic scope. The distribution network of Hoarty covers more ground and involves more cable, but is essentially the same. Simply because the network of Hoarty is bigger than the networks of Nicholson or Hamlin does not qualify it as being an entirely different field of endeavor.

Lastly, applicant argues that there is no motivation to combine the system of Hoarty with that of Nicholson and Hamlin, stating that Hoarty combines signals prior to their delivery to a condominium (applicant's remarks, page 6, last paragraph).

In response, as stated above, the systems of Nicholson, Hamlin, and Hoarty all relate to the same field of endeavor, namely, transmission of signals

from a central controller to different individual receivers over a network. Hoarty teaches nothing regarding condominiums, only transmission of combined signals to subscribers. There are many different subscribers within a condominium, thus it is not contrary to the teachings of Hoarty to perform the combining of analog and digital signals within a condominium wherein said condominium includes a central controller for performing said combining. Again, the only different that can be pointed to is one of scope, or size of the network involved, which is nominal, and thus does not teach away from a combination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1- 4, 6-9, 12-36, 50, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholson (4,901,367, of record) in view of Hamlin (5,574,964, of record) and Hoarty (5,485,197, of record).

Regarding claims 1 and 50, Nicholson discloses a system (fig. 1) for the distribution to a community environment (col. 1, lines 19-40) of a plurality of signals transmitted (from program sources 40, col. 4, lines 30-42), comprising means for receiving said signals (fig. 5, program sources include local broadcasts, satellite programming, and pay-per-view programming, thus the

receiving means include a cable and/or antenna receiver in addition to a satellite receiver), means for converting the frequencies of said signals (RSPC 2 in fig. 3, which demodulate then remodulate signals from broadcast source onto personal channels, col. 4, lines 30-42), means for mixing said information signals (fig. 2, combiner 21) onto a distribution network (fig. 2, distribution cable 3), a plurality of signal sockets operatively connect to said means for mixing for receiving said signals and (fig. 3, output of filter 23 which leads to TV 25) a plurality of receivers each of which is connected to a respected one of said signal sockets for receiving said signals (fig. 3, TV 25), wherein the signals are reserved to predetermined signal sockets (each user is designated a particular channel for use, col. 4 line 67 – col. 5 line 13).

Nicholson fails to disclose the signals are both analog and digital signals and including means for demodulating said digital signals having different transmission standards and means for remodulating said digital signals with a sole type of digital modulation, providing the analog signals and the remodulated digital signals to the means for mixing said information signals on the distribution network, and that the receivers that are intended to receive the digital signals are fit to decode such sole type of modulation.

In an analogous art, Hamlin teaches a local video distribution system (fig. 1) wherein multiple signals with multiple transmission standards are received (fig. 1, terrestrial antenna 24, satellite receiver 26, cable connection 30, telephone line 37), demodulated (via demodulators 101, 102, 103 in fig. 2), and then

remodulated (via remodulator 104 in fig. 2) into a sole type of modulation (signals are all converted into a common format, col. 3, lines 3-54) wherein the receivers (fig. 4, interface pod 44 outputting to receiving unit 46) are fit to decode such sole type of modulation. The benefit of such a system is to utilize a preexisting network to distribute multiple signals received in differing formats without requiring unique receiver equipment at the different reception sites (col. 1 line 65 – col. 2 line 7).

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Nicholson to include receiving signals in multiple transmission standards, demodulating, and then remodulating them into a sole type of modulation for reception and decoding by individual receivers, as taught by Hamlin, for the benefit of distributing multiple signals received in differing formats, for greater flexibility in programming offered to users, without requiring unique receiver equipment at the different reception sites.

Nicholson and Hamlin fail to disclose the signals are both analog and digital.

In an analogous art, Hoarty teaches a television distribution system (col. 5, lines 15-25) wherein digital and analog signals are combined into a single distribution feed (fig. 10, col. 7, lines 36-39 and col. 8, lines 12-18) for the benefit of providing content from a common network simultaneously to different households with different receiver equipment (col. 8, lines 50-57).

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Nicholson and Hamlin to receive, mix, and combine both analog and digital signals, as taught by Hoarty, for the benefit of providing content from a common network simultaneously to different households with different receiver equipment, some where the household has only invested in a legacy analog receiver, and others where the households have invested more advanced digital receivers.

Regarding claims 2 and 51, Nicholson, Hamlin, and Hoarty disclose the system and method of claims 1 and 50, wherein the sole type of modulation is Quadrature Amplitude Modulation (Hoarty teaches the digital signals are provided as QAM signals, col. 8, lines 15-18).

Regarding claim 3, Nicholson, Hamlin, and Hoarty disclose the system of claim 1, wherein the means for converting (Nicholson, RSPC 2 in figs. 2 and 3) convert the remodulated signals to personal channels, in a frequency reserved to one of the predetermined signal sockets and forbidden to the remaining sockets (Nicholson teaches personal frequency channels are allocated to each user to delivery of requested information signals, col. 4 line 66 – col. 5 line 25, wherein a bandwidth filter 23 is part of each socket for filtering out all other signals except for a given user's personal channel, col. 5, lines 4-37) and comprising a plurality of filtering means (Nicholson, bandwidth filter 23 in fig. 3) for allowing access by

onely one of said signal sockets to a corresponding one of said personal channels (Nicholson, as shown in fig. 3, wherein the output of directional coupler 6 leads to filter 23 for routing a unique user channel to a particular user), and user control means for determining which o the remodulated signals is included in said channel (Nicholson, remote control unit 33 in fig. 3, col. 5, lines 14-25).

Regarding claim 4, Nicholson, Hamlin, and Hoarty disclose the system of claim 1, wherein the distribution network is composed of coaxial cable (Nicholson, col. 4 lines 30-36).

Regarding claims 6-8, Nicholson, Hamlin, and Hoarty disclose the system of claim 1, but fail to disclose the personal channel is 8 MHz wide and the personal channel is contained in a frequency band between 230-445 MHz.

The assignment of personal channel bandwidth and the frequencies at which the personal channel is resident are at the discretion of the designer but limited by the transmission line medium, FCC regulations, and the amount of data to transmit from one point to another.

It would have been obvious at the time to a person of ordinary skill in the art to limit the personal channel to 8 MHz wide, as this would allow more personal channels to be carried over the distribution network (as Nicholson originally teaches using 12 MHz wide channels, as the bandwidth filter 23 used for isolating a personal channel is a 12 MHz bandwidth filter), and placing said

personal channel in the 230-445 MHz range is beneficial for the lower attenuation experienced by signals placed in said range as opposed to placing them in higher frequency ranges.

Regarding claim 9, Nicholson, Hamlin, and Hoarty disclose the system of claim 3, wherein means for allowing access to personal channels comprises means for filtering the personal channel and is upstream from the signal socket (Nicholson teaches each user receives information signals from personal user channels thar are accessed through filters 23 which then output to TV 25, col. 5, lines 4-6 and lines 26-37).

Regarding claim 12, Nicholson, Hamlin, and Hoarty disclose the system of claim 1, wherein selection of said personal channel is performed by a return channel ("user's assigned transmit channel", Nicholson, col. 5, lines 14-25).

Regarding claims 13-17, Nicholson, Hamlin, and Hoarty disclose the system of claim 12, but fail to disclose the return channel is FSK, PSK, QPSK, or QAM modulated, or bi-directional under TDMA procedure.

The official notice taken that FSK, PSK, QPSK, and QAM modulation, and TDMA multiplexing are all notoriously well known in the art as methods for transmission of digital data, each having particular benefits associated with each

was not traversed by the applicant, and is thus taken as an admission of the facts presented.

Therefore, it would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Nicholson, Hamlin, and Hoarty to modulate the return channel using FSK, PSK, QPSK, or QAM procedures or bi-directional under TDMA procedure, as each has particular advantages associated with each, such as the robustness (resistance to noise) of QPSK modulation, or the transmission efficiency (high bit rate) of QAM, or the bandwidth conservation of TDMA (which allows multiple digital channels to be multiplexed onto a single physical channel).

Regarding claim 18, Nicholson, Hamlin, and Hoarty disclose the system of claim 12, but fail to disclose the return channel has a bandwidth of 128 KHz.

The official notice taken that it is notoriously well known in the art to designate return channel bandwidth as 128 kHz bands, as this is a part of the DVB-RC (digital video broadcasting-return channel) standard was not traversed by the applicant, and is thus taken as an admission of the facts presented.

Therefore, it would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Nicholson, Hamlin, and Hoarty to limit the return channel bandwidth to 128 KHz so as to conform to the DVC-RC standard, an established and agreed upon standard for transmitting digital video,

assuring hardware compliance among devices in a system, thus alleviating the need for specialized, custom equipment.

Regarding claim 19, Nicholson, Hamlin, and Hoarty disclose the system of claim 12, but fail to disclose the return channel is between 41 and 46.5 MHz.

The official notice taken that it is notoriously well known to place return channels in the 5-50 MHz range, as frequencies beyond this range are utilized for higher bandwidth, downstream communications was not traversed by the applicant, and is thus taken as an admission of the facts presented.

Therefore, it would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Nicholson, Hamlin, and Hoarty to place the return channel between 41 and 46.5MHz, as it is conventional to place return channels in cable distribution networks in the 5-50 MHz range.

Regarding claim 20, Nicholson, Hamlin, and Hoarty disclose the system of claim 12, wherein the return channel uses the same coaxial cable of the distribution network of the system (Nicholson, col. 5, lines 14-25).

Regarding claim 21, Nicholson, Hamlin, and Hoarty disclose the system of claim 12, wherein the return channel used by a user is inaccessible to all other users of the system (Nicholson teaches return channels are assigned to particular users for exclusive use, col. 5, lines 20-23 and col. 1, lines 22-24).

Regarding claim 22, Nicholson, Hamlin, and Hoarty disclose the system of claim 12, wherein the return channel is radio frequency irradiated (Nicholson teaches upstream information is radio frequency modulated signals transmitted over the user allocated transmit channel, col. 5, lines 51-55).

Regarding claim 23, Nicholson, Hamlin, and Hoarty disclose the system of claim 1, wherein the selection, modulation, and frequency conversion in a predetermined channel of the digital signal are obtained by means of a transmodualtor (Nicholson, RSPC 3 in fig. 3, col. 4 line 59 – col. 5 line 13).

Regarding claim 24, Nicholson, Hamlin, and Hoarty disclose the system of claim 1, wherein a user terminal (Nicholson, fig. 4, office terminal 4) and an IRD receiver-decoder (Nicholson, fig. 4, TV receiver 25) are provided, which can be operated by a single remote control (Nicholson, fig. 4, remote control unit 33, controls all communications, both video which is received by receiver 25 and data which is receiver by modem 26 in the office terminal 4, col. 5 lines 14-25 and col. 6 lines 19-36).

Regarding claim 25, Hamlin additionally teaches placing the components for receiving and remodulating signals of different transmission formats into a sole transmodulator device (fig. 2 contains the demodulation and remodulation

devices all within converter 34, col. 3, lines 24-54), for an economic means to transmodulate multiple received signals in a modular fashion (only the demodulation portions need to be added when upgrading the system, col. 3, lines 47-54).

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Nicholson, Hamlin, and Hoarty to place the plural selection means within a single transmodulator device, as taught by Hamlin, for the benefit of maintaining the modularity of the system in an economic fashion, as only the receiving and demodulation portions need to be added to expand the system, output hardware is shared and does not need to be duplicated when expanding the system.

Regarding claims 26 and 27, Nicholson, Hamlin, and Hoarty disclose the system of claim 25, wherein the sole transmodulator device comprises plural tuner means adadapteded to perform the selection of digital signals within at least two frequency ranges (Nicholson, fig. 3, tuner 16, wherein there is one tuner per customer as there is one RSPC per customer, col. 4, lines 30-42), and plural demodulation means adadapteded to demodulate at least two of said digital signals (Nicholson, fig. 3, demodulator 17, wherein there is one demodulator per customer as there is one RSPC per customer, col. 4, lines 30-42) transmitted with different standards (Hamlin, col. 3, lines 3-12).

Regarding claim 28, Nicholson, Hamlin, and Hoarty disclose the system of claim 26, wherein said transmodulator device includes a commutator (Hamlin, fig. 2, input to remodulator 104) adadapteded for receiving the digital signals coming from the demodulators.

Regarding claims 29 and 30, Nicholson, Hamlin, and Hoarty disclose the system of claim 28, wherein the transmodulator comprises a modulator (Hamlin, fig. 2, remodulator 104) for remodulating the output of the communator and a converter (also part of remodulator 104, prior to output from output interface 59, Hamlin, fig. 2) for converting in frequency the final output into a predetermined channel (Hamlin, col. 3, lines 24-54).

Regarding claim 31, Nicholson, Hamlin, and Hoarty disclose the system of claim 3, wherein control means (Nicholson, fig. 2, remote control 33) are adadapteded to generate digital upstream signals and convert them in frequency into the personal channel (Nicholson, col. 5, lines 51-55), and that second selection and handling means (Nicholson, transmit switch 14 in fig. 6) are provided for said digital signals in transmission (Nicholson teaches the selection means is used for communication of internal signals with outside sources, col. 6, lines 3-10), and means (Nicholson, col. 6, lines 3-10, CATV, SMATV, microwave or fiber optic link) for the transmission of said upstream signals from satellite or by cable.

Regarding claim 32, Nicholson, Hamlin, and Hoarty disclose the system of claim 31, wherein the transmodulator means and the second selection means both operate on downstream and upstream signals under SCPC procedure (wherein SCPC stands for single channel per carrier, and Nicholson teaches all upstream and downstream communications take place on user allocated channels, col. 5, lines 4-25, wherein the individual channels are specific to particular frequency bands).

Regarding claim 33, Nicholson, Hamlin, and Hoarty disclose the system of claim 31, wherein said personal channel utilizes the FDMA procedure (Nicholson teaches the users personal channel is a 12 MHz band spit into a downstream band and an upstream band, thus upstream and downstream signals are simultaneously present in said personal channel, col. 1, lines 22-27).

Regarding claim 34, Nicholson, Hamlin, and Hoart disclose the system of claim 33, wherein the upstream and downstream signals occupy non-overlapping frequency bands (Nicholson teaches upstream and downstream communication occur on simultaneously on two distinct TV channels, col. 1, lines 22-24).

Regarding claim 35, Nicholson, Hamlin, and Hoarty disclose the system of claim 31, but fail to disclose the personal channel is used under time division multiple access (TDMA) procedure.

The official notice taken that it is notoriously well known in to art to define channels using TDMA, as TDMA conserves bandwidth, was not traversed by the applicant, and is thus taken as an admission of the facts presented.

Therefore, it would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Nicholson, Hamlin, and Hoarty to use the personal channel under TDMA procedure, as TDMA is an effective means to increase the number of channels available on a given bandwidth, more efficiently utilizing said bandwidth.

Regarding claim 36, Nicholson, Hamlin, and Hoarty disclose the system of claim 32, but fail to disclose the selection means and selection and handling means are contained in the same container.

The official notice taken that placement of physical devices in the same physical container is a convenient placement of hardware, as it is compact, and thus conserves space, was not traversed by the applicant, and is thus taken as an admission of the facts presented.

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Nicholson, Hamlin, and Hoarty to place the first and

second selection means in the same container for convenience and space conservation.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholson, Hamlin, and Hoarty as applied to claim 1 above, and further in view of Macdonald et al. (5,835,128, of record) [Macdonald].

Regarding claim 5, Nicholson, Hamlin, and Hoarty disclose the system of claim 1, but fail to disclose the distribution network comprises MMDS or LMDS networks.

In an analogous art, Macdonald teaches a video distribution system wherein video signals are redistributed via wireless MMDS or LMDS networks (col. 4, lines 5-18), wherein wireless video distribution is free from geographic limitations and do not require any special medium for transmission of signals.

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Nicholson, Hamlin, and Hoarty to utilize MMDS or LMDS networks for the distribution of information signals, as taught by Macdonald, for the benefit of free distribution of signals without regard to geographic limitations and without relying on costly cables or wiring which is subject to wear and breakage.

5. Claims 10, 11, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholson, Hamlin, and Hoarty as applied to claims 1 and 3 above, and further in view of Dufresne et al. (4,982,440, of record) [Dufresne].

Regarding claims 10, 11, and 49, Nicholson, Hamlin, and Hoarty disclose the system of claims 1 and 3, wherein the system includes filtering means (Nicholson, fig. 3, bandwidth filter 23) and personal channels (Nicholson, col. 5, lines 4-6), but fail to disclose the filtering means includes a band stop filter adadapteded to eliminate reception of personal channels by a receiver through the signal socket in parallel with a channel pass filter adadapteded to let a personal channel through to a single user.

In an analogous art, Dufresne teaches a video distribution system (fig. 3) wherein particular downstream information is routed through a first filter in the downstream direction (fig. 4, filter 13, col. 7, lines 40-50) and is connected in parallel with a second filter (fig. 4, filter 16) for preventing undesired upstream noise (col. 7 line 60 – col. 8 line 12).

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Nicholson, Hamlin, and Hoarty to include in the filtering means parallel filters, one for band pass functionality and the other for band rejection functionality, as taught by Dufresne, wherein the first filter is adapted to let a personal channel through to a single user, as it's function is to allow downstream signals to pass through while blocking upstream signals, and the second filter is adapted to eliminate the reception of personal channels as it

blocks all downstream signals in addition to blocking upstream noise. The benefit of this arrangement is to selectively allow for the reception of a particular user channel in the downstream direction while also blocking any upstream noise, wherein upstream noise by nature would include locally generated signals that do not belong on the upstream path.

6. Claims 37-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholson, Hamlin, and Hoarty as applied to claim 3 above, and further in view of Saward (5,537,473, of record) and Diehl et al. (5,835,864, of record) [Diehl].

Regarding claim 37, Nicholson, Hamlin, and Hoarty disclose the system of claim 36, but fail to disclose the receiver (Nicholson, office terminal 4 in fig. 4) is adapted to perform an access function to a plurality of conditioned access services by reading the information contained in a smart card, and that said information contained in said smart card control the means for frequency converting received reserved digital signals in the personal channel.

In an analogous art, Saward discloses utilizing a smart card to control a receiver in allowing said receiver to receive conditional services by reading information stored in said smart card (col. 3, lines 1-30), providing a highly secure means by which customers may receive conditional access programming.

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Nicholson, Hamlin, and Hoarty to include accessing a plurality of conditional access services by reading information

contained in a smart card, as taught by Saward, for the benefit of providing a highly secure means by which customers may receive conditional access programming, as smart cards are unique to individual users and highly resistant to tampering.

Nicholson, Hamlin, Hoarty, and Saward fail to disclose said information contained in said smart card further controls the means for frequency converting received reserved digital signals in the personal channel.

In an analogous art, Diehl teaches using information stored on a smart card (in EEPROM memory, col. 3, lines 3-6) to program frequency conversion means (col. 2 line 49 – col. 3 line 11), for the benefit of easily and dynamically programming receiver equipment according to the desired configuration of the users (col. 1, lines 50-62).

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Nicholson, Hamlin, Hoarty, and Saward to include controlling the means for frequency converting received signals using information in said smart card, as taught by Diehl, for the benefit of easily and dynamically programming receiver equipment according to the desired configuration of the users, allowing the economic use of common receiver equipment at a plurality of sites.

Regarding claims 38-42, Nicholson, Hamlin, Hoarty, Saward, and Diehl disclose the system of claim 37, wherein said information contained in said smart

card comprises information for tuning the transmodulator means and transponder preselection means (Diehl teaches the information includes channel map information for proper tuning, col. 2 line 66 – col. 3 line 11, which would include information for proper tuning when the service is satellite television, one of the signal sources as disclosed by Nicholson, as shown in fig. 2).

Regarding claim 43, Diehl additionally discloses the information stored on the smart card is for the purpose of dynamically programming common receiver equipment so that it may properly tune to designated channels depending on how the equipment is implemented (col. 2 line 49 – col. 3 line 11), and such a teaching also applies to programming a receiver with the personal channel of a particular user (Nicholson, user allocated frequencies, col. 1, lines 22-24, col. 4, lines 30-36, and col. 5, lines 20-23).

It would have been obvious at the time to a person of ordinary skill in the art to further modify the system disclosed by Nicholson, Hamlin, Hoarty, Saward, and Diehl to include in said information stored on said smart card, frequency information so said personal channel, as taught by Diehl, for the benefit of easily and dynamically programming receiver equipment according to the desired configuration of the users, allowing the economic use of common receiver equipment at a plurality of sites.

Regarding claim 44, Nicholson, Hamlin, Hoarty, Saward, and Diehl disclose the system of claim 37, wherein the selection means and the smart card contain respective electronic keys, whose congruence enable the operation of said distribution system of a plurality of signals to a community environment (Saward teaches the smart card includes decryption keys, which are provided to reception equipment for decrypting signals to enable reception, col. 3, lines 20-27).

Regarding claim 45, Saward additionally discloses a device in a receiver (descrambler control circuit 22 in fig.3) which writes data in a program memory of a miroprocessor contained in the smart card ("off-air" update to stored information, col. 3, lines 20-30), which enables broadcasters to dynamically maintain the information used by customers for accessing services.

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclose by Nicholson, Hamlin, Hoarty, Saward, and Diehl to include a device in said control means for writing data in a program memory of a microprocessor contained in the smart card, as taught by Saward, for the benefit of enabling broadcasters to dynamically maintain the information used by customers for accessing services, such as for billing purposes and a convenient means by which customers may upgrade their service.

Regarding claim 46, Nicholson, Hamlin, Hoarty, Saward, and Diehl disclose the system of claim 45, wherein the program memory is and EEPROM type memory (Diehl, col. 3, lines 3-6).

Regarding claim 47, Nicholson, Hamlin, Hoarty, Saward, and Diehl disclose the system of claim 45, wherein the device for writing data in a program memory of a microprocessor contained in the smart card operates on data sent to the control means by modem (Nicholson teaches data communications are carried out using modems, col. 5, lines 38-44).

Regarding claim 48, Nicholson, Hamlin, Hoarty, Saward, and Diehl disclose the system of claim 45, wherein the device for writing data in a program memory of a microprocessor contained in the smart card operates on data sent to the control means by means of the service information contained in the received digital signal (the information being written to the smart card is service information, as they are customer access rights, as taught by Saward, and channel map information, as taught by Diehl).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

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Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dominic D. Saltarelli whose telephone number is (571) 272-7302. The examiner can normally be reached on Monday - Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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